Balæna australis, Desmoulins.

The block of vertebræ, marked "Right Whale of New Zealand," consisted of the seven cervical and first dorsal vertebræ ankylosed into one mass. They were from an animal captured at the peninsula of Kaipara.

The bones were broken in places and generally friable, with the roots of plants in the intervertebral foramina, presenting the appearance of having long been exposed to the weather. The fusion of the cervical vertebræ with each other was very complete, for not only were the bodies ankylosed into a solid mass, but also the spines and laminæ. The fusion of the first dorsal by its spine and laminæ with the corresponding parts of the seventh cervical was also complete, so that the spines and laminæ formed a massive crest of bone which sloped upwards and backwards.

The body of the first dorsal was, however, connected, through an irregular band of ossification by only its inferior border, with the corresponding part of the seventh cervical; for the bodies generally of these two vertebræ had evidently been separated in the usual way by an intervertebral disc. The left transverse process of the atlas was broken, but when entire the vertebra must have had a transverse diameter of at least 29 inches. Its width across the anterior articular surfaces was 14 inches, and these surfaces were separated from each other by a non-articular depression, varying in width from 2 to 3 inches. The length of the cervical part of the block, along the line of the spines, was 14 inches, along the inferior surface of the bodies, 11½ inches, when the body of the first dorsal was included the length was 15 inches.

The superior transverse processes were present in all the cervicals. Those of the first and second vertebræ were massive, and projected outwards for several inches; the remainder were much more slender, and in the case of the third to the sixth comparatively short, whilst that of the seventh was again longer, and curved outwards and forwards. In the case of the anterior six cervicals, these processes were fused into a continuous bar of bone at their outer ends, whilst the superior transverse process of the seventh was not ankylosed on the right side, but on the left it was united to the transverse process of the first dorsal vertebra. The inferior transverse processes of the second and third vertebræ were massive and partially ankylosed, that of the fourth was much more slender, and fused with that of the third. They were absent in the fifth, sixth, and seventh. In no instance did the superior and inferior transverse processes unite externally so as to bound a "vertebrarterial" foramen.

The transverse process of the first dorsal vertebra was in series with the superior transverse processes of the cervicals, and like them projected from the side of the neural arch. It was 11 inches long, and curved forwards and outwards external to the superior transverse processes of the more posterior cervicals, so that its free end was close to the transverse process of the atlas. A faint tubercle projecting from the side of the body of this vertebra probably represented a rudimentary, inferior transverse process.